**Name: Kenyon Geetings**

# CMSC 115 Reading Guide

Please enter your responses in red.

# 10.1 Introduction Read

# 10.2 Divide and Conquer Read

1. What is top-down refinement? Top-down refinement is where you begin with a solution from a very high level, not in Python, and then proceed to refine the description in more detail. This is basically saying we work with the big picture first, then get more complicated.

# 10.3 Breast Cancer Classifier Read

## 10.3.1 Re-read

## 10.3.2 Read

1. What is the classification approach? The classification approach is a program that will take in an a new example and determine what “class” the new example belongs to simply on the basis of previous examples that it has observed.

## 10.3.3 Read

## 10.3.4 Read

1. Describe their basic approach for building a classifier. Their basic approach for building a classifier related to the tumor problem was to look at the tumor attribute for each individual, and then combine the observations on that attribute into a decision value used to classify an individual for that particular attribute.

# 10.4 Designing the Classifier Skim

1. How did they run and run their program from the iPython console at the end of Section 10.4(.0)? They import the iPython console.

## 10.4.1 Read

## 10.4.2 Re-read

1. Why did they choose a tuple for patient data? They chose a tuple for patient data because a tuple is immutable, so the patient data does not change.
2. What is the structure of their classifier? The structure of their classifier consists of 9 floating point values.

## 10.4.3 Read

## 10.4.4 Read

1. What is the return value of the make\_training\_set function? The return value of the make training set function is a list from the training set list that was created earlier.

## 10.4.5 Read

## 10.4.6 Re-read

## 10.4.7 Re-read

1. How did they test their train\_classifier function? How confident can we be that such testing is complete? They tested their train classifier function and took the code that had been written so far and tested a simple data set that had been created and create a new set. We can bee confident that the testing is complete by checking the averages with a calculator.

## 10.4.8 Read

## 10.4.9 Read

1. How well can this simple classifier do at predicting malignancy? This simple classifier can do well at predicting malignancy as it can use previous inputs to determine if a new input is malignant.